

AMENDMENTS TO THE CLAIMS:

Please cancel Claims 29, 63, and 65 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 24, 27, 58, 59, 64, 66, and 67 and add Claims 68 through 75 as follows:

1 - 23. (Cancelled)

24. (Currently Amended) ~~An image processing device~~ A printing apparatus comprising:

a scanner for reading an image of a document and outputting an image signal;

a control unit adapted for controlling said ~~image processing device~~ printing apparatus and performing image processing on the image signal output from said scanner to provide a first processed image signal, the image processing being processing that is necessary for copying;

a first bidirectional general-purpose interface adapted for transmitting, under control of said control unit, the image signal output by said scanner to an external computer, which performs image processing on the transmitted image signal to provide a second processed image signal, and for receiving the second processed image signal from the external computer, the image processing performed by the external computer being processing that is necessary for copying; and

a second bidirectional general-purpose interface of a same standard as said first bidirectional general-purpose interface adapted for outputting the first processed image signal and the second processed image signal to a ~~printer~~ printing unit,

wherein said ~~image processing device~~ printing apparatus has a plurality of modes including a read mode, a print mode, a first copying mode, and a second copying mode,

wherein, in the read mode for performing read operation in response to a read designation by a user inputted via the external computer, the image signal from said scanner is transmitted to the external computer via said first bidirectional general-purpose interface,

wherein, in the print mode for performing print operation in response to a print designation by the user inputted via the external computer, the image signal from the external computer is transmitted to the ~~printer~~ printing unit via said first bidirectional general-purpose interface and said second bidirectional general-purpose interface,

wherein, in the first copying mode for performing a first copying operation based on the second processed image signal in response to a copying designation by the user inputted via the external computer, the image signal from said scanner is transmitted to the external computer, where the image signal is processed into the second processed image signal, via said control unit and said first bidirectional general-purpose interface, and thereafter the second processed image signal is transmitted to the ~~printer~~ printing unit via said first bidirectional general-purpose interface, said control unit, and said second bidirectional general-purpose interface, the copying operation being completed without requiring any additional designation by the user other than the copying designation, and

wherein, in the second copying mode for performing a second copying operation based on the first processed image signal, the image signal from said scanner is transmitted to said control unit where the image signal is processed into the first processed image signal and the first processed image signal is transmitted to the printer printing unit via said second bidirectional general-purpose interface.

25 - 26. (Cancelled)

27. (Currently Amended) ~~An image processing~~ A printing method for ~~an image processing device~~ a printing apparatus capable of operating in a plurality of modes including a read mode, a print mode, a first copying mode, and a second copying mode, said method comprising the steps of:

in the read mode for performing read operation in response to a read designation by a user inputted via an external computer connected to the printing apparatus with a first bidirectional general-purpose interface, reading an image of a document and outputting an image signal by means of a scanner, and transmitting the image signal output by the scanner to ~~[[an]]~~ the external computer via ~~[[a]]~~ the first bidirectional general-purpose interface,

in the print mode for performing print operation in response to a print designation by the user inputted via the external computer, receiving an image signal from the external computer via the first bidirectional general-purpose interface and outputting the image signal to a printer printing unit via a second bidirectional general-purpose interface of a same standard as the first bidirectional general-purpose interface,

in the first copying mode for performing a first copying operation based on a second processed image signal in response to a copying designation by the user inputted via the external computer:

(a) reading an image of a document and outputting an image signal by means of the scanner;

(b) transmitting the image signal output by the scanner to the external computer via the first bidirectional general-purpose interface, wherein the external computer performs image processing on the transmitted image signal to provide the second processed image signal, the image processing being processing that is necessary for copying;

(c) receiving the second processed image signal from the external computer via the first bidirectional general-purpose interface; and

(d) outputting the second processed image signal to the ~~printer~~ printing unit via the second bidirectional general-purpose interface, wherein the copying operation is completed without requiring any additional designation by the user other than the copying designation, and

in said second copying mode for performing a second copy operation based on a first processed image data:

(a) reading an image of a document and outputting an image signal by the scanner;

(b) performing image processing on the image signal output by the scanner, to provide a first processed image signal, the image processing being processing that is necessary for copying, and

(c) outputting the first processed image signal to the ~~printer~~ printing unit via said second bidirectional general-purpose interface.

28 - 57. (Cancelled)

58. (Currently Amended) The ~~image processing device~~ printing apparatus according to claim 24, wherein said scanner generates a color image signal.

59. (Currently Amended) The ~~image processing device~~ printing apparatus according to claim 24, wherein said control unit has a density adjusting function.

60 - 63. (Cancelled)

64. (Currently Amended) ~~An image processing device~~ A printing apparatus comprising:

a scanner for reading an image of a document and outputting an image signal;

a control unit adapted for controlling said ~~image processing device~~ printing apparatus and performing image processing on the image signal output from said scanner to provide a first processed image signal, the image processing being processing that is necessary for copying;

a first interface adapted for transmitting the image signal output by said scanner to an external computer, which performs image processing on the transmitted image signal to provide a second processed image signal, and for receiving the second processed image signal from the

external computer, the image processing performed by the external computer being processing that is necessary for copying; and

a second interface adapted for outputting the first processed image signal and the second processed image signal to a printer printing unit,

wherein said ~~image processing device~~ printing apparatus has a first copying mode, and a second copying mode,

wherein, in the first copying mode for performing a first copy operation based on the second processed image signal in response to a copying designation by ~~the~~ a user inputted via the external computer, the image signal is transmitted to the external computer, where the image signal is processed into the second processed image signal, via said control unit and said first interface, then the second processed image signal is transmitted to the printer printing unit via said first interface, said control unit, and said second interface, the copying operation being completed without requiring any additional designation by the user other than the copying designation, and

wherein, in the second copying mode for performing a second copying operation based on the first processed image signal, the image signal is transmitted to said control unit where the image signal is processed into the first processed image signal and the first processed image signal is transmitted to the printer printing unit via said second interface.

65. (Cancelled)

66. (Currently Amended) The ~~image processing device~~ printing apparatus according to claim 64, wherein said ~~image processing device~~ printing apparatus has a print mode, in which print data is transmitted from the external computer to said control unit via said first interface and the ~~printer~~ printing unit prints the print data in response to a print designation by the user inputted via the external computer, and an image reading mode in which a image signal from the scanner is ~~transmit~~ transmitted from said control unit from the external computer via said first interface in response to a read designation by the user inputted via the external computer.

67. (Currently Amended) ~~An image processing~~ A printing method for ~~an image processing device~~ a printing apparatus capable of operating in a first copying mode and a second copying mode, said method comprising the steps of:

in the first copying mode for performing first copying operation based on a second processed image signal in response to a copying designation by a user inputted via an external computer connected to the printing apparatus with a first interface:

(a) reading an image of a document and outputting an image signal by a scanner;

(b) transmitting the image signal output by the scanner to ~~[[an]]~~ the external computer, via ~~[[a]]~~ the first interface, wherein the external computer performs image processing on the transmitted image signal to provide a second processed image signal, the image processing being processing that is necessary for copying;

(c) receiving the second processing image signal from the external computer via the first interface; and

(d) outputting the second processed image signal to a ~~printer~~ printing unit via a second interface, wherein the copying operation is completed without requiring any additional designation by the user other than the copying designation, and

in the second copying mode for performing second copying operation based on a first processed image data:

(a) reading an image of a document and outputting an image signal by the scanner;

(b) performing image processing on the image signal output by the scanner, to provide a first processed image signal, the image processing being processing that is necessary for copying; and

(c) outputting the first processed image signal to the ~~printer~~ printing unit via the second interface.

68. (New) The printing apparatus according to claim 24, wherein, in the read mode, the image signal from said scanner is transmitted to the external computer in accordance with reception of a read command outputted from the external computer in response to the read designation,

wherein, in the print mode, the image signal from the external computer is transmitted to the printing unit in accordance with reception of a print command transmitted from the external computer in response to the print designation, and

wherein, in the first copy mode, the image signal from said scanner is transmitted to the external computer in accordance with reception of the read command transmitted from the



external computer in response to the copying designation, and thereafter the second processed image signal is transmitted to the printing unit in accordance with reception of the print command outputted from the external computer in response to the copying designation.

69. (New) The printing method according to claim 27, wherein, in the read mode, the image signal from said scanner is transmitted to the external computer in accordance with reception of a read command outputted from the external computer in response to the read designation,

wherein, in the print mode, the image signal from the external computer is transmitted to the printing unit in accordance with reception of a print command transmitted from the external computer in response to the print designation, and

wherein, in the first copy mode, the image signal from said scanner is transmitted to the external computer in accordance with reception of the read command transmitted from the external computer in response to the copying designation, and thereafter the second processed image signal is transmitted to the printing unit in accordance with reception of the print command transmitted from the external computer in response to the copying designation.

70. (New) The printing apparatus according to claim 64, wherein, in the first copy mode, the image signal from said scanner is transmitted to the external computer in accordance with reception of the read command transmitted from the external computer in response to the copying designation, and thereafter the second processed image signal is transmitted to the

printing unit in accordance with reception of the print command transmitted from the external computer in response to the copying designation.

71. (New) The printing apparatus according to claim 66, wherein, in the read mode, the image signal from said scanner is transmitted to the external computer in accordance with reception of a read command transmitted from the external computer in response to the read designation,

wherein, in the print mode, the image signal from the external computer is transmitted to the printing unit in accordance with reception of a print command transmitted from the external computer in response to the print designation, and

wherein, in the first copy mode, the image signal from said scanner is transmitted to the external computer in accordance with reception of the read command transmitted from the external computer in response to the copying designation, and thereafter the second processed image signal is transmitted to the printing unit in accordance with reception of the print command transmitted from the external computer in response to the copying designation.

72. (New) A printing system comprising a printing apparatus and a information processing apparatus,

wherein the information processing apparatus includes:

- (a) a copying designation unit, adapted to designate a start for copying; and
- (b) a processing unit, adapted to process an image signal to provide a second processed image signal, and

wherein the printing apparatus comprises:

(a) a scanner for reading an image of a document and outputting an image signal;

(b) a control unit adapted for controlling said printing apparatus and performing image processing on the image signal output from said scanner, to provide a first processed image signal, the image signal processing being processing that is necessary for copying;

(c) a first interface for transmitting, under control of said control unit, the image signal output by said scanner to said information processing apparatus, which performs image processing on the transmitted image signal to provide a second processed image signal, and for receiving the second processed image signal from the information processing apparatus, the image processing being processing that is necessary for copying;

(d) a second interface adapted for outputting the first processed image signal and the second processed image signal to a printing unit; and

(e) a copy key for designating a start for copying,

wherein said printing apparatus has a plurality of modes including a first copying mode performed in response to a copying designation by said information processing apparatus, and a second copying mode performed in response to a copying designation by said copy key,

wherein, in the first copying mode for performing a first copy operation based on the second processed image signal in response to a copying designation by the user, the image signal

from said scanner is transmitted to said information processing apparatus, where the image signal is processed to the second processed image signal, via said control unit and said first interface, and thereafter the second processed image signal is transmitted to the printing unit via said first interface, said control unit, and said second interface, wherein the copy operation is completed without requiring any additional designation by the user other than the copying designation, and

wherein, in the second copying mode for performing a second copy operation based on the first processed image signal, the image signal from said scanner is transmitted to said control unit where the image signal is processed to the first image signal and the first image signal is transmitted to the printing unit via said second interface.

73. (New) The system according to claim 72, wherein said information processing apparatus further comprises:

a read designation unit, adapted to designate a start for reading of a document; and  
a print designation unit, adapted to designate a start for printing data that said information processing apparatus transmits,

wherein said printing apparatus has a print mode, in which print data is transmitted from the information processing apparatus to said control unit via said first interface and the printing unit prints the print data in response to a print designation designated by the print designation unit, and an image reading mode in which an image signal from the scanner is transmitted from said control unit from the information processing apparatus via said first interface in response to a read designation designated by the read designation unit.

74. (New) The system according to claim 72, wherein, in the first copy mode, the image signal from said scanner is transmitted to the information processing apparatus in accordance with reception of the read command transmitted from the information processing apparatus in response to the copying designation, and thereafter the second processed image signal is transmitted to the printing unit in accordance with reception of the print command transmitted from the information processing apparatus in response to the copying designation.

75. (New) The system according to claim 73, wherein, in the read mode, the image signal from said scanner is transmitted to the information processing apparatus in accordance with reception of a read command transmitted from the information processing apparatus to the printing apparatus in response to the read designation,

wherein, in the print mode, the image signal transmitted from the information processing apparatus to the printing apparatus is transmitted to the printing unit in accordance with reception of a print command transmitted from the information processing apparatus to the printing apparatus in response to the print designation, and

wherein, in the first copy mode, the image signal from said scanner is transmitted to the information processing apparatus in accordance with reception of the read command transmitted from the information processing apparatus in response to the copying designation, and thereafter the second processed image signal is transmitted to the printer in accordance with reception of the print command transmitted from the information processing apparatus to the printing apparatus in response to the copying designation.